a reaction system configured to engage the blade upon detection of the dangerous condition, where the engagement of the reaction mechanism with the blade tends to urge the blade downward.

22. The table saw of claim 21, where the reaction system is further configured to stop the rotation of the blade.

23. A table saw comprising:

a frame including a table defining a work surface;

a rotatable blade supported by the frame and positionable at an operable height above the work surface to cut a workpiece on the work surface, and;

a user-operable adjustment mechanism adapted to adjust the height of the blade relative to the work surface;

a motor to drive the blade;

a detection system configured to detect a dangerous condition between a person and the blade; and

a brake mechanism configured to engage and decelerate the blade upon detection of the dangerous condition without causing the blade to kick up.

24. The table saw of claim 23, where the brake mechanism is further configured to stop the rotation of the blade.

25. A saw comprising:

a support structure defining a work zone;

a rotatable blade adapted to cut a workpiece in the work zone, where the blade has an angular momentum when rotating;

a motor to drive the blade;

a detection system configured to detect a dangerous condition between a person and the blade; and

a reaction system configured to engage the blade upon detection of the dangerous condition between the person and the blade, and configured to use at least part of the angular momentum of the blade to generate a force tending to urge the blade away from the work zone.

26. The saw of claim 25, where the reaction system is further configured to stop the rotation of the blade.

27. A woodworking machine comprising:

a support structure defining a work zone in which a workpiece may be cut;

a blade adapted to cut the workpiece in the work zone;

a motor to drive the blade;

a detection system adapted to detect contact between a person and the blade; and

a reaction system adapted to urge the blade away from the work zone upon the detection of the contact.

28. The woodworking machine of claim 27, where the woodworking machine is a table saw, where the support structure includes a table, where the reaction system is positioned below the table, and where the reaction system is adapted to urge the blade in a direction downward relative to the table.

29. The woodworking machine of claim 27, where the woodworking machine is a miter saw, where the support structure includes a base and a support arm moveable

relative to the base, where the blade is mounted on the support arm, and where the reaction system is adapted to urge the blade upward relative to the base.

30. The woodworking machine of claim 27, where the reaction system is further adapted to engage and stop the blade.

31. A woodworking machine comprising:

a support structure defining a work zone in which a workpiece may be cut;

a blade adapted to move into the work zone to cut the workpiece;

a motor to drive the blade;

a detection system adapted to detect contact between a person and the blade; and

a reaction system adapted to limit movement of the blade into the work zone upon the detection of the contact.

32. The woodworking machine of claim 31, where the woodworking machine is a miter saw, where the support structure includes a base and a support arm moveable relative to the base, where the blade is mounted on the support arm, where the blade is configured to rotate, where the blade has an angular momentum when rotating, where the reaction system includes a brake to engage the blade, and where the brake is adapted to engage the blade and use at least part of the angular momentum of the blade to limit the movement of the blade into the work zone upon the detection of the dangerous condition.

33. The miter saw of claim 32, further comprising a pivot joint between the support arm and base and adapted to allow the support arm to pivot relative to the base, where the blade has a rotational axis, where the blade has a front portion defined as that

portion beyond the rotational axis away from the pivot joint, and where the brake is adapted to engage the blade at a position on the front portion of the blade.

34. The woodworking machine of claim 31, where the reaction system is further adapted to engage and stop the blade.--

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on February 26, 2001.

Stephen F. Gass
Date of Signature: February 26, 2001